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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHENG, JACQUELINE

ART UNIT

PAPER NUMBER

3768

MAIL DATE

DELIVERY MODE

04/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/729,199	Applicant(s) LEWANDOWSKI ET AL.	
	Examiner JACQUELINE CHENG	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7,8,12 and 14-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7,8,12 and 14-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's amendments filed March 2, 2009 have overcome the claim objections so the claim objections to claims 7 and 12 have been withdrawn.
2. Applicant's arguments filed March 2, 2009 have been fully considered but they are not persuasive. Firstly for independent claim 14 the added limitations to the claim are intended use of the apparatus. Section 2113 of the MPEP states the following: A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Since *Brainard, II*, *Takeuchi* and *Greenwood* teaches all the structural limitations of independent claim 14, the rejection of claims 14 and 15 as stated in the rejection dated November 28, 2008 still stands.
3. As to the method claims, the examiner respectfully disagrees with the applicant's arguments that the amendments overcomes the current rejection under *Brainard, II*, *Takeuchi* and *Greenwood*. *Brainard, II* teaches an ultrasound probe which is at a location spaced away from the tympanic membrane of a human patient (col. 3 line 42-45, col. 4 line 43). Furthermore it is obvious that an ultrasonic probe that is inserted into the ear would not touch the tympanic membrane as having a probe pressed against the tympanic membrane can cause damage to ear, for the ultrasonic pulses to be read the tympanic membrane needs to be able to vibrate and have waves reflect off of the tympanic membrane. If the probe was touching the tympanic membrane

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the membrane would not be able to vibrate, nor would there be room for the waves to reflect off of the tympanic membrane. It is for these reasons it is believed that the rejection dated November 28, 2008 still stands and is repeated below along with objections and rejections to the newly added claims.

Claim Objections

4. Claims 19-22 are objected to because the claims claim receiving an ultrasonic signal twice. To transceiver to both transmit and receive. The suggested claim language is either --are adapted to transceive an ultrasonic signal-- or --are adapted to both transmit and receive an ultrasonic signal--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claims 7, 8, 12, 14, 16, and 19-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brainard, II (US 6,048,320) in view of Takeuchi (*Viscoelastic Properties Of Middle Ear Effusions From Pediatric Otitis Media With Effusion And Their Relation To Gross Appearance*), in view of Greenwood (US 2006/0172734 A1).

Brainard, II discloses using an ultrasound probe to detect the presence of middle ear effusion in a human patient (col. 3 line 8-11, col. 8 line 1-2). Although Brainard, II does not disclose measuring the viscosity of the fluid, it is well known that determining the viscosity helps to diagnose if a bacterial infection in the middle ear effusion is present as discussed by Takeuchi. It would therefore be obvious to use Brainard, II to determine the viscosity of middle ear effusion to further the utility of Brainard to obtain a more accurate diagnoses of, not only the presence of an abnormality, but also what type of abnormality it is, especially since it is well known that ultrasound probes are capable determining viscosity of fluid using the pulse echo amplitude such as disclosed by Greenwood (paragraph 0059). Since there are at least three different types of otitis media (such as Purulent Otitis Media, Serous Otitis Media, and Mucoid Otitis Media, see Jung), it would also be obvious to have at least three different values to compare the viscosity value to, to be able to determine which type of disease is present.

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8. **Claims 15, 17, and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brainard, II in view of Takeuchi, in view of Greenwood, further in view of Erikson (US 4,281,550).

Brainard discloses using ultrasonic waves, however fails to disclose how the ultrasonic waves are produced. It would therefore be obvious to one skilled in the art at the time of the invention to use any well known method of creating ultrasound waves such as disclosed by Erikson. Erikson teaches uses a curved array which can have a plurality of transducers are operated simultaneously or have a plurality of transducers operated sequentially (col. 5 line 20-30).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACQUELINE CHENG whose telephone number is (571)272-5596. The examiner can normally be reached on M-F 10:00-6:30.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC

/Long V Le/
Supervisory Patent Examiner, Art Unit 3768